Eyes for Early Language Learning:
Deaf mothers’ practices with joint attention and early literacy

Michele Berke, Ph.D.
Elaine Gale, Ph.D.
Thank you
Elaine Gale

Assistant Professor of Deaf & Hard of Hearing

Email: egale@hunter.cuny.edu

918 West

(866) 922–9043 (VideoPhone)

Professional and Educational Background


M.A. Deaf Education, Smith College, MA, 1995
THE LEXINGTON SCHOOL FOR THE DEAF OCCUPIED A CITY-OWNED BUILDING AT THIS SITE FROM 1880 UNTIL 1968. TODAY THE LEXINGTON SCHOOL FOR THE DEAF/CENTER FOR THE DEAF IS LOCATED IN JACKSON HEIGHTS, QUEENS.
Lexington School for the Deaf – Late 1940s
Then

- Large Class
- Oral
- Late Identified
- Parent Education Class

Now

- Small Class
- Sign
- Early Identification
- IFSP
Listening and Spoken Language

Visual Language
Eyes for Early Language Learning, Why?

Joint Attention

Child coordinates attention between a person and an object or activity
Child uses or responds to symbolic words or gestures to communicate
Why Symbol-Infused Joint Attention?

Vocabulary Development

Adamson, Bakeman, & Deckner, 2004; Masur, Flynn, & Eichorst, 2005; Smith, Adamson, & Bakeman, 1988; Tomasello & Farrar, 1986; Tomasello & Todd, 1983
Initiation and Joint Attention

Follow Child’s Lead influence interaction duration and vocabulary size

Tomasello & Farrar, 1986; Tomasello & Todd, 1983; Harris et al., 1989; Spencer et al., 1992; Spencer & Harris, 2006)
## Research Questions

| Seconds in Symbol Infused Joint Attention by Group | Number of Sustained Interaction by Group | Number of Each Initiation Type by Group |
Participants

- **Signing DOD**: 5 Dyads
- **Signing DOH**: 5 Dyads
- **HOH**: 5 Dyads

**TOTAL**: 15 Dyads

**Deaf Toddlers**
- Severe or profound hearing level
- Identified by 11 months of age
- No Cochlear Implant
- Use sign as a form of communication

**All Toddlers**
- 22-to-26 months of age
- Parents had high school diplomas or higher
- Parents reported no diagnosed or suspected disability
- Parents reported Cognitive Quotient (CQ) of 80 or higher on the Situation Comprehension or Self-Help subscales of the Minnesota Child Development Inventory (MCDI)
Procedures

Parent View

Child View
Procedures

- **Spontaneous Interaction**
  - SIJA & Initiation Free: 5 Minutes

- **Elicited Interaction**
  - SIJA & Initiation Bag: 5 Minutes
  - BagII: 5 Minutes

- **Free Play**
  - 30 minutes

**TOTAL**

15 minutes analyzed for **Time in SIJA** and **Number of Each Initiation Type and Sustained Interaction**
Coding System
Seconds in SIJA

**SIJA Episode**
Toddler must respond to or produce at least two symbols related to the shared activity within a 15-second period.
Coding System
Number of Sustained Interactions

At least 4 turns per participant
Verbal and non-verbal interaction included as turns
Coding System
Types of Initiation

- Mother Direct
- Mother Follow
- Toddler Direct
- Toddler Follow
- Undetermined
Results

Seconds in Symbol Infused Joint Attention by Group

Number of Sustained Interaction by Group

Number of Each Initiation Type by Group

DOD < HOH ($p = .049$)

DOH < HOH ($p = .029$)

significant correlation between number of sustained interactions and mother follow ($r = .564$, $p = .028$)
Clinical Implications:
Deaf Mothers’ Practices

- Sequential Pattern
- Time to Explore
- Follow Child’s Lead
Putting it all together

- Sequential Pattern
- Time to Explore
- Follow Child’s Lead

Visual Modality

Eyes for Early Language Learning: Deaf Mothers’ Practices

Deaf Adults in EI Programs

Eyes for Early Language Learning: Deaf mothers’ practices with joint attention and early literacy

Michele Berke, Ph.D.

What is shared reading?
Why is it important?

• Related to literacy skills
  • Understanding how to hold a book
  • Knowing which way to turn pages

• Related to language development
  • Vocabulary
  • Syntax/grammar

• Opportunity to teach
  • Our own values
  • About the world around us
  • About upcoming experiences
Methods

• Participants
  • 10 in each group (d/d and h/h)
  • Children’s ages: 3-5 years
  • Subjects matched for child’s age, mother’s education
  • Children screened using EOWPVT and PPVT
Methods

• Procedures
  • 2 state schools for the Deaf (CA)
    • Hearing dyads from CA and CO
  • Posted on listservs
  • Visited homes at least 2 times
    • Language screening
    • Books provided
    • One book (Nobody Listens to Andrew) read during 1st and 2nd visit
Shared reading strategies

• Attention getting and maintenance
  • Joint attention
• Asking questions
  • Yes/no vs inference/prediction
• Connecting concepts
  • Recalling events
• Encouraging participation
• Interactions between language and print
  • Labeling/simplifying vs expanding
• Making corrections
Deaf moms reading compared to hearing moms

• Deaf mothers:
  • Longer time spent reading
  • Attention getting strategies
  • Higher level questions
  • Encouraging/Inviting participation
  • Corrections

• Hearing mothers:
  • More straight reading of the text
Shared Reading Program
Deaf parents:

Translate stories using ASL*
Keep both languages (ASL and English) visible*
Not constrained by the text
Re-read stories on a storytelling to story reading continuum
Follow their child’s lead
Make what is implied explicit
Adjust sign placement to fit the story
Adjust signing style to fit the story

Connect concepts in the story to the real world
Use attention maintenance strategies
Use eye gaze to elicit participation
Engage in role play to extend concepts
Use ASL variations to sign repetitive English phrases
Provide a positive and reinforcing environment
Expect the child to become literate
Specific techniques Deaf moms use to connect to English print

- Chaining
- Providing English definitions
- Interpreting English word sounds
- Explaining rhyming
- Explaining literary techniques (font)
- Explaining semantic meanings
- Providing identifiers (e.g. name signs)
- Using body shifts to show character identification
Chaining

- Points to word, fingerspells word, signs word, points to word
Explaining English sound words

- Zing
- Whoosh
- Swish
Providing English Definitions

• B-O-G (Bog)
Explaining rhyming

• Mother points out words that look the same will sound the same (like a poem)
Explaining Semantic Meanings

- Knowledge of ASL/English (Listen)
- Cultural cues
ASL variation for repetitive English words/phrases

• Creating rhythm by alternating hands
Overall Conclusions

Deaf adults offer:

- Insight for appropriate techniques used to gain/maintain their children’s’ attention
- Techniques for sign placement and visual strategies for making interaction/text accessible
- Recognition that interactions need to be sequential rather than simultaneous
Thank you!

• The families!
• Dr. Brenda Schick
• Dr. Christie Yoshinaga-Itano
Dr. Amy Hile

Founding teacher of the Metro Deaf School in Saint Paul, Minnesota, the first bilingual charter school in the United States for deaf and hard of hearing children.

Ph.D., University of Colorado at Boulder, Speech Language & Hearing Sciences, 2009

Associate Professor, Gallaudet University, Department of Education